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Application : 09/466568

Examiner : McKelvey

GAU : 1636

From: PAP

Location: (IDC) FMF FDC

Date: 4/29/05

Tracking #: 06087179

Week Date: 3/14/05

DOC CODE	DOC DATE	MISCELLANEOUS
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<input type="checkbox"/> DRW	_____	<u>8/12/2002</u>
<input type="checkbox"/> OATH	_____	
<input type="checkbox"/> 312	_____	
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[RUSH] MESSAGE: Please provide a clearer copy of the sequence listing found in SEQLIST of 8/12/2002. Data at top of pages or illegible due to hole punch.

Thank you

[XRUSH] RESPONSE: _____

Corrected

See Attachments

INITIALS: RP

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REV 10/04



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To: K. Pinkney	USPTO	703-308-6642	

From: Melissa S. Rones

Comments:

Re: U.S. Application No. 09/466568
Attorney Docket No.: APBI-P16-316

As per your request, enclosed please find a copy of the sequence listing filed on August 12, 2002 in the aobve-referenced case.

PLEASE COMPLETE WHEN SUBMITTING TO FAX DEPARTMENT

Date: May 13, 2005

Time: 12:50 PM

File Symbol: APBI-P16-316

Personal ID Number: 28498

Submitted By: Melissa S. Rones

Phone:

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TRANSMITTAL FORM <i>(to be used for all correspondence after initial filing)</i>	Application Number	09/466568	
	Filing Date	December 17, 1999	
	First Named Inventor	Gerald R. Crabtree	
	Art Unit	1636	
	Examiner Name	T. A. McKelvey	
Total Number of Pages in This Submission	34	Attorney Docket Number	APBI-P16-316

ENCLOSURES (Check all that apply)

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment/Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Reply to Missing Parts/Incomplete Application <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____ <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):
Remarks: Copy of sequence listing (33 pages)		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name	ROPES & GRAY LLP		
Signature			
Printed name	Melissa S. Rones, Ph.D.		
Date	May 13, 2005	Reg. No.	54,408

I hereby certify that this correspondence is being facsimile transmitted to the Patent and Trademark Office, facsimile no. , on the date shown below.

Dated: 5/13/05 Signature:  (Ginny Blundell)

SEQUENCE LISTING

(1) GENERAL INFORMATION:

- (i) APPLICANT: Crabtree, Gerald R.
Schreiber, Stuart L.
Spencer, David M.
Wandless, Thomas J.
Belshaw, Peter
- (ii) TITLE OF INVENTION: REGULATED TRANSCRIPTION OF TARGETED
GENES AND OTHER BIOLOGICAL EVENTS
- (iii) NUMBER OF SEQUENCES: 81
- (iv) CORRESPONDENCE ADDRESS:
 - (A) ADDRESSEE: ARIAD Pharmaceuticals, Inc.
 - (B) STREET: 26 Landsdowne Street
 - (C) CITY: Cambridge
 - (D) STATE: Massachusetts
 - (E) COUNTRY: USA
 - (F) ZIP: 02139
- (v) COMPUTER READABLE FORM:
 - (A) MEDIUM TYPE: Floppy disk
 - (B) COMPUTER: IBM PC compatible
 - (C) OPERATING SYSTEM: PC/DOS/MS/DOS
 - (D) SOFTWARE: PatentIn Release #1.0, Version #1.25
- (vi) CURRENT APPLICATION DATA:
 - (A) APPLICATION NUMBER: US 08/478,386
 - (B) FILING DATE: 07/JUN/1995
 - (C) CLASSIFICATION: 435
- (viii) ATTORNEY/AGENT INFORMATION:
 - (A) NAME: Figg, E. Anthony
 - (B) REGISTRATION NUMBER: 27,195
 - (C) REFERENCE/DOCKET NUMBER: 2054-114A
- (ix) TELECOMMUNICATION INFORMATION:
 - (A) TELEPHONE: (202) 783-6040
 - (B) TELEFAX: (202) 783-6031

(2) INFORMATION FOR SEQ ID NO:1:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 14 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

Met Gly Ser Ser Lys Ser Lys Pro Lys Asp Pro Ser Gln Arg
1 5 10

(2) INFORMATION FOR SEQ ID NO:2:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

GTTAAGTTAA C

11

(2) INFORMATION FOR SEQ ID NO:3:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

TGACTCAGCG C

11

(2) INFORMATION FOR SEQ ID NO:4:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 33 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 6..11
- (D) OTHER INFORMATION: /note= "Sac II restriction site."

(ix) FEATURE:

- (A) NAME/KEY: misc_signal
- (B) LOCATION: 12..16
- (D) OTHER INFORMATION: /note= "Kozak sequence."

(ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 17..31

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 17..33
- (D) OTHER INFORMATION: /note= "Region of homology with target sequence."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

CGACACCGCG GCCACC ATG GCC ACA ATT GGA GC
Met Ala Thr Ile Gly
1 5

33

(2) INFORMATION FOR SEQ ID NO:5:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 5 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Met Ala Thr Ile Gly
1 5

(2) INFORMATION FOR SEQ ID NO:6:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 27 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 6..11
- (D) OTHER INFORMATION: /note= "Xho I restriction site."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 12..27
- (D) OTHER INFORMATION: /note= "Region of homology with target sequence."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

CGACACTCGA GAGCCCATGA CTTCTGG

27

(2) INFORMATION FOR SEQ ID NO:7:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 4 amino acids
 - (B) TYPE: amino acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (A) NAME/KEY: Peptide
- (B) LOCATION: 1..4
- (D) OTHER INFORMATION: /note= "Translation product of complement of SEQ ID NO:6, bases 9 to 20."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

Ser Trp Ala Leu

1

(2) INFORMATION FOR SEQ ID NO:8:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 41 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 6..11
- (D) OTHER INFORMATION: /note= "Xho I restriction site."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 12..41
- (D) OTHER INFORMATION: /note= "Region of homology with target sequence."

(ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 9..41

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 28
- (D) OTHER INFORMATION: /note= "A to G."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

CGACACTC GAG CTC TGC TAC TTG CTA GGT GGA ATC CTC TTC
Glu Leu Cys Tyr Leu Leu Gly Gly Ile Leu Phe
1 5 10

41

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

Glu Leu Cys Tyr Leu Leu Gly Gly Ile Leu Phe
1 5 10

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 24 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 3..8
- (D) OTHER INFORMATION: /note= "Eco RI restriction site."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 9..24
- (D) OTHER INFORMATION: /note= "Region of homology with target sequence."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 24
- (D) OTHER INFORMATION: /note= "G to C."

(ix) FEATURE:

- (A) NAME/KEY: misc_signal
- (B) LOCATION: complement (9..11)
- (D) OTHER INFORMATION: /note= "Translational stop encoded in complementary strand."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

GCGAATTCTT AGCGAGGGGC CAGC

24

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 4 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (A) NAME/KEY: Peptide
- (B) LOCATION: 1..4
- (D) OTHER INFORMATION: /note= "Translational product of complement to SEQ ID NO:10, bases 12 to 23."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Leu Ala Pro Arg

1

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 33 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 3..8
- (D) OTHER INFORMATION: /note= "Eco RI restriction."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 12..17
- (D) OTHER INFORMATION: /note= "Sal I restriction site."

(ix) FEATURE:

- (A) NAME/KEY: misc_signal
- (B) LOCATION: complement (9..11)

(D) OTHER INFORMATION: /note= "Translational stop signal encoded on complementary strand."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 18..33
- (D) OTHER INFORMATION: /note= "Region of homology with target sequence."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

GCGAATTCTT AGTCGACGCG AGGGGCCAGG GTC

33

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 4 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (A) NAME/KEY: Peptide
- (B) LOCATION: 1..4
- (D) OTHER INFORMATION: /note= "Translational product of complement to SEQ ID NO:12, bases 18 to 29."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

Leu Ala Pro Arg

1

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 4..9
- (D) OTHER INFORMATION: /note= "Xho I restriction site."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 13
- (D) OTHER INFORMATION: /note= "T to G."

(ix) FEATURE:

- (A) NAME/KEY: misc feature
- (B) LOCATION: 4..25
- (D) OTHER INFORMATION: /note= "Region of homology with target sequence."

(ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 10..24

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

GGGCTCGAG CTC GGC TAC TTG CTA G
Leu Gly Tyr Leu Leu
1 5

25

(2) INFORMATION FOR SEQ ID NO:15:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 5 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

Leu Gly Tyr Leu Leu
1 5

(2) INFORMATION FOR SEQ ID NO:16:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 26 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 6..11
- (D) OTHER INFORMATION: /note= "Xho I restriction site."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 12..26
- (D) OTHER INFORMATION: /note= "Region of homology with target sequence."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

CGACACTCGA GGTGACGGAC AAGGTC

26

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 6..11
- (D) OTHER INFORMATION: /note= "Sal I restriction site."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 12..26
- (D) OTHER INFORMATION: /note= "Region of homology with target sequence."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

CGACAGTCGA CCCAATCAGG GACCTC

26

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 33 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 1..5
- (D) OTHER INFORMATION: /note= "Xho I restriction site."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 10..15
- (D) OTHER INFORMATION: /note= "Bsi WI restriction site."

(ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 6..32

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

TCGAG TAT CCG TAC GAC GTA CCA GAC TAC GCA G
Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
1 5

33

(2) INFORMATION FOR SEQ ID NO:19:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 9 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: protein

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
1 5

(2) INFORMATION FOR SEQ ID NO:20:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 33 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (ix) FEATURE:
 - (A) NAME/KEY: misc_feature
 - (B) LOCATION: 1..5
 - (D) OTHER INFORMATION: /note= "Sal I restriction site."

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

TCGACTGCGT AGTCTGGTAC GTCGTACGGA TAC

33

(2) INFORMATION FOR SEQ ID NO:21:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 33 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: cDNA
- (ix) FEATURE:
 - (A) NAME/KEY: misc_feature
 - (B) LOCATION: 1..5
 - (D) OTHER INFORMATION: /note= "Sal I restriction site."

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

TCGACTATCC GTACGACGTA CCAGACTACG CAC

33

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 33 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 1..5
- (D) OTHER INFORMATION: /note= "Xho I restriction site."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

TCGAGTGCCT AGTCTGGTAC GTCGTACGGA TAG

33

(2) INFORMATION FOR SEQ ID NO:23:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 80 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 6..11
- (D) OTHER INFORMATION: /note= "Sac II restriction site."

(ix) FEATURE:

- (A) NAME/KEY: misc_signal
- (B) LOCATION: 12..16
- (D) OTHER INFORMATION: /note= "Kozak sequence."

(ix) FEATURE:

- (A) NAME/KEY: misc_signal
- (B) LOCATION: 17..58
- (D) OTHER INFORMATION: /note= "Myristoylation signal."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 59..64
- (D) OTHER INFORMATION: /note= "Xho I restriction site."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 65..80
- (D) OTHER INFORMATION: /note= "Zeta homology."

(ix) FEATURE:

- (A) NAME/KEY: CDS
(B) LOCATION: 17..79

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

CGACACCGCG GCCACC ATG GGG AGT AGC AAG AGC AAG CCT AAG GAC CCC 49
Met Gly Ser Ser Lys Ser Lys Pro Lys Asp Pro
1 5 10

AGC CAG CGC CTC GAG AGG AGT GCA GAG ACT G 80
Ser Gln Arg Leu Glu Arg Ser Ala Glu Thr
15 20

(2) INFORMATION FOR SEQ ID NO:24:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 21 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

Met Gly Ser Ser Lys Ser Lys Pro Lys Asp Pro Ser Gln Arg Leu Glu
1 5 10 15

Arg Ser Ala Glu Thr
20

(2) INFORMATION FOR SEQ ID NO:25:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 27 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: CDS
(B) LOCATION: 12..26

(ix) FEATURE:

- (A) NAME/KEY: misc feature
(B) LOCATION: 6..11
(D) OTHER INFORMATION: /note= "Xho I restriction site."

(ix) FEATURE:

- (A) NAME/KEY: misc feature
(B) LOCATION: 12..27

(D) OTHER INFORMATION: /note= "Region of homology with target sequence."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

CGACACTCGA G GAG CTC TGT GAC GAT G
Glu Leu Cys Asp Asp
1 5

27

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 5 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

Glu Leu Cys Asp Asp
1 5

(2) INFORMATION FOR SEQ ID NO:27:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 41 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

(A) NAME/KEY: misc_feature
(B) LOCATION: 6..11
(D) OTHER INFORMATION: /note= "Xho I restriction site."

(ix) FEATURE:

(A) NAME/KEY: misc_feature
(B) LOCATION: 12..41
(D) OTHER INFORMATION: /note= "Region of homology with target sequence."

(ix) FEATURE:

(A) NAME/KEY: misc_feature
(B) LOCATION: 27..29
(D) OTHER INFORMATION: /note= "GAT to AAG."

(ix) FEATURE:

(A) NAME/KEY: CDS
(B) LOCATION: 9..41

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

CGACACTC GAG CTC TGC TAC TTG CTA AAG GGA ATC CTC TTC
Glu Leu Cys Tyr Leu Leu Lys Gly Ile Leu Phe
1 5 10

41

(2) INFORMATION FOR SEQ ID NO:28:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

Glu Leu Cys Tyr Leu Leu Lys Gly Ile Leu Phe
1 5 10

(2) INFORMATION FOR SEQ ID NO:29:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 44 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
(B) LOCATION: 6..11
(D) OTHER INFORMATION: /note= "Xho I restriction site."

(ix) FEATURE:

- (A) NAME/KEY: CDS
(B) LOCATION: 9..44

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
(B) LOCATION: 27..44
(D) OTHER INFORMATION: /note= "Region of homology with target sequence."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

CGACACTC GAG CTG CTG GAT CCG AAG CTC TGC TAC TTG CTA AAG
Glu Leu Leu Asp Pro Lys Leu Cys Tyr Leu Leu Lys
1 5 10

44

(2) INFORMATION FOR SEQ ID NO:30:

- (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

Glu Leu Leu Asp Pro Lys Leu Cys Tyr Leu Leu Lys
1 5 10

(2) INFORMATION FOR SEQ ID NO:31:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 31 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 6..11
- (D) OTHER INFORMATION: /note= "Xho I restriction site."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 12..31
- (D) OTHER INFORMATION: /note= "Region of homology with target sequence."

(ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 9..31

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

CGACACTC GAG ACA ACA GAG TAC CAG GTA GC
Glu Thr Thr Glu Tyr Gln Val Ala
1 5

31

(2) INFORMATION FOR SEQ ID NO:32:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 8 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

Glu Thr Thr Glu Tyr Gln Val Ala
1 5

(2) INFORMATION FOR SEQ ID NO:33:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 28 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

- (ix) FEATURE:
(A) NAME/KEY: misc_feature
(B) LOCATION: 6..11
(D) OTHER INFORMATION: /note= "Xho I restriction site."

- (ix) FEATURE:
(A) NAME/KEY: misc_feature
(B) LOCATION: 12..28
(D) OTHER INFORMATION: /note= "Region of homology with target sequence."

- (ix) FEATURE:
(A) NAME/KEY: CDS
(B) LOCATION: 9..28

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

CGACACTC GAG GGC GTG CAG GTG GAG AC
Glu Gly Val Gln Val Glu Thr
1 5

28

(2) INFORMATION FOR SEQ ID NO:34:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 7 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

Glu Gly Val Gln Val Glu Thr
1 5

(2) INFORMATION FOR SEQ ID NO:35:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 27 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

(A) NAME/KEY: misc_feature

(B) LOCATION: 6..11

(D) OTHER INFORMATION: /note= "Sal I restriction site."

(ix) FEATURE:

(A) NAME/KEY: misc_feature

(B) LOCATION: 12..27

(D) OTHER INFORMATION: /note= "Region of homology with target sequence."

(ix) FEATURE:

(A) NAME/KEY: CDS

(B) LOCATION: complement (9..26)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

CGACAGTCGA CTTCCAGTTT TAGAAGC

27

(2) INFORMATION FOR SEQ ID NO:36:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 6 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

Leu Leu Lys Leu Glu Val

1

5

(2) INFORMATION FOR SEQ ID NO:37:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 27 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

(A) NAME/KEY: misc_feature

(B) LOCATION: 7..12

(D) OTHER INFORMATION: /note= "Xho I restriction site."

(ix) FEATURE:

(A) NAME/KEY: CDS

(B) LOCATION: 10..27

(ix) FEATURE:

(A) NAME/KEY: misc_feature

(B) LOCATION: 13..27

(D) OTHER INFORMATION: /note= "Region of homology with target sequence."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

TCGACACTC GAG ACG GGG GCC GAG GGC
Glu Thr Gly Ala Glu Gly
1 5

27

(2) INFORMATION FOR SEQ ID NO:38:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 6 amino acids

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

Glu Thr Gly Ala Glu Gly
1 5

(2) INFORMATION FOR SEQ ID NO:39:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 28 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

(A) NAME/KEY: misc_feature

(B) LOCATION: 7..12

(D) OTHER INFORMATION: /note= "Sal I restriction site."

(ix) FEATURE:

(A) NAME/KEY: CDS

(B) LOCATION: complement (10..18)

(ix) FEATURE:

(A) NAME/KEY: misc_feature

(B) LOCATION: 13..28

(D) OTHER INFORMATION: /note= "Region of homology with target sequence."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

CCGACAGTCG ACCTCTATTT TGAGCAGC

28

(2) INFORMATION FOR SEQ ID NO:40:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 3 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

Ile Glu Val

1

(2) INFORMATION FOR SEQ ID NO:41:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 38 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:

CGACACCGCG GCCACCATGA AGCTACTGTC TTCTATCG

38

(2) INFORMATION FOR SEQ ID NO:42:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 28 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

CGACAGTCGA CCGATACAGT CAACTGTC

28

(2) INFORMATION FOR SEQ ID NO:43:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 38 base pairs
 - (B) TYPE: nucleic acid

- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 6..11
- (D) OTHER INFORMATION: /note= "Sac II restriction site."

(ix) FEATURE:

- (A) NAME/KEY: misc_signal
- (B) LOCATION: 12..16
- (D) OTHER INFORMATION: /note= "Kozak sequence."

(ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 17..37

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 17..38
- (D) OTHER INFORMATION: /note= "Gal4 (1-147) coding region."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:

CGACACCGCG GCCACC ATG AAG CTA CTG TCT TCT ATC G
Met Lys Leu Leu Ser Ser Ile
1 5

38

(2) INFORMATION FOR SEQ ID NO:44:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 7 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:

Met Lys Leu Leu Ser Ser Ile
1 5

(2) INFORMATION FOR SEQ ID NO:45:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 28 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: double
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 1..17
- (D) OTHER INFORMATION: /note= "Region encoding for C-terminal end of Gal4 (1-147)."

(ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 3..17

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 18..23
- (D) OTHER INFORMATION: /note= "Sal I restriction site."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:

GA CAG TTG ACT GTA TCG GTCGACTGTC G
Arg Gln Leu Thr Val Ser
1 5

28

(2) INFORMATION FOR SEQ ID NO:46:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 6 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:

Arg Gln Leu Thr Val Ser
1 5

(2) INFORMATION FOR SEQ ID NO:47:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 34 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:

CGACACCGCG GCCACCATGG TTTCTAAGCT GAGC

34

(2) INFORMATION FOR SEQ ID NO:48:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 28 base pairs

- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:48:

CGACAGTCGA CCAACTTGTG CCGGAAGG

28

(2) INFORMATION FOR SEQ ID NO:49:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 34 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 6..11
- (D) OTHER INFORMATION: /note= "Sac II restriction site."

(ix) FEATURE:

- (A) NAME/KEY: misc_signal
- (B) LOCATION: 12..16
- (D) OTHER INFORMATION: /note= "Kozak sequence."

(ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 17..34

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 17..34
- (D) OTHER INFORMATION: /note= "Region encoding N-terminal end of HNF1 (1281)."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:

CGACACCGCG GCCACC ATG GTT TCT AAG CTG AGC
Met Val Ser Lys Leu Ser
1 5

34

(2) INFORMATION FOR SEQ ID NO:50:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 6 amino acids
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_signal
- (B) LOCATION: 3..7
- (D) OTHER INFORMATION: /note= "Kozak sequence."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 1..11
- (D) OTHER INFORMATION: /note= "Complementary to bases 5 to 15 of SEQ ID NO:54."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:

GGCCACCATG C

11

(2) INFORMATION FOR SEQ ID NO:54:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 3 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ix) FEATURE:

- (A) NAME/KEY: Peptide
- (B) LOCATION: 1..3
- (D) OTHER INFORMATION: /note= "Translation product of SEQ ID NO:53 and SEQ ID NO:55. Translational start site at base 8 of SEQ ID NO:53."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:

Met Leu Glu

1

(2) INFORMATION FOR SEQ ID NO:55:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 17 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: both
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 14..17
- (D) OTHER INFORMATION: /note= "Sac II restriction site overhang."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:

Met Val Ser Lys Leu Ser
1 5

(2) INFORMATION FOR SEQ ID NO:51:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 28 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: double
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
(B) LOCATION: 1..20
(D) OTHER INFORMATION: /note= "Region encoding for C-terminal end
of HNF1 (1-282)."

(ix) FEATURE:

- (A) NAME/KEY: CDS
(B) LOCATION: 3..17

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:

CC TTC CGG CAC AAG TTG GTCGACTGTC G
Ala Phe Arg His Lys Leu
1 5

28

(2) INFORMATION FOR SEQ ID NO:52:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 6 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:

Ala Phe Arg His Lys Leu
1 5

(2) INFORMATION FOR SEQ ID NO:53:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 11 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: both
(D) TOPOLOGY: linear

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 1..5
- (D) OTHER INFORMATION: /note= "Sal I restriction site overhang."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 5..27
- (D) OTHER INFORMATION: /note= "Complementary to SEQ ID NO:60, bases 5 to 27."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:58:

TCGACCCTAA GAAGAAGAGA AAGGTAC

27

(2) INFORMATION FOR SEQ ID NO:59:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 11 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ix) FEATURE:

- (A) NAME/KEY: Peptide
- (B) LOCATION: 1..11
- (D) OTHER INFORMATION: /note= "Translation product of SEQ ID NOS:58 and 60."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:

Leu	Asp	Pro	Lys	Lys	Lys	Arg	Lys	Val	Leu	Glu
1				5					10	

(2) INFORMATION FOR SEQ ID NO:60:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 27 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: both
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 1..5
- (D) OTHER INFORMATION: /note= "Xho I restriction site overhang."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 1..5
- (D) OTHER INFORMATION: /note= "Xho I restriction site overhang."

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 5..15
- (D) OTHER INFORMATION: /note= "Complementary to bases 1 to 11 of SEQ ID NO:53."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:

TCGAGCATGG TGGCCGC

17

(2) INFORMATION FOR SEQ ID NO:56:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 27 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:

TCGACCCTAA GAMGAAGAGA AAGGTAC

27

(2) INFORMATION FOR SEQ ID NO:57:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 27 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:

TCGAGTACCT TTCTCTTCKT CTTAGGG

27

(2) INFORMATION FOR SEQ ID NO:58:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 27 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: both
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(B) LOCATION: 5..27

(D) OTHER INFORMATION: /note= "Complementary to SEQ ID NO:58,
bases 5 to 27."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:

TCGAGTACCT TTCTCTTCTT CTTAGGG

27

(2) INFORMATION FOR SEQ ID NO:61:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 29 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:

CGACAGTCGA CGCCCCCCCG ACCGATGTC

29

(2) INFORMATION FOR SEQ ID NO:62:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:62:

CGACACTCGA GCCCACCCTA CTCGTC

26

(2) INFORMATION FOR SEQ ID NO:63:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 29 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 6..11
- (D) OTHER INFORMATION: /note= "Sal I restriction site."

(ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 12..29

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 12..29
- (D) OTHER INFORMATION: /note= "Region encoding N[^]terminal end of VP16 (413[^]490)."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:

CGACAGTCGA C GCC CCC CCG ACC GAT GTC
Ala Pro Pro Thr Asp Val
1 5

29

(2) INFORMATION FOR SEQ ID NO:64:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 6 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:64:

Ala Pro Pro Thr Asp Val
1 5

(2) INFORMATION FOR SEQ ID NO:65:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 26 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: double
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(ix) FEATURE:

- (A) NAME/KEY: CDS
- (B) LOCATION: 1..15

(ix) FEATURE:

- (A) NAME/KEY: misc_feature
- (B) LOCATION: 1..15
- (D) OTHER INFORMATION: /note= "Region encoding C-terminal end of VP16 (413-490)."

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:65:

GAC GAG TAC GGT GGG CTCGAGTGTC G
Asp Glu Tyr Gly Gly
1 5

26

(2) INFORMATION FOR SEQ ID NO:66:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 5 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:

Asp Glu Tyr Gly Gly
1 5

(2) INFORMATION FOR SEQ ID NO:67:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 23 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:67:

GGAATTCCAT ATGGGCGTGC AGG

23

(2) INFORMATION FOR SEQ ID NO:68:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 5 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:68:

His Met Gly Val Gln
1 5

(2) INFORMATION FOR SEQ ID NO:69:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 39 base pairs
(B) TYPE: nucleic acid

(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:

CTGTCCCGGG ANNNNNNNNN TTTCTTTCCA TCTTCAAGC

39

(2) INFORMATION FOR SEQ ID NO:70:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:70:

Arg Ser Xaa Xaa Xaa Lys Lys Gly Asp Glu Leu
1 5 10

(2) INFORMATION FOR SEQ ID NO:71:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 64 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:71:

CTGTCCCGGG AGGAATCAAA TTTCTTTCCA TCTTCAAGCA TNNNNNNNNN GTGCACCACG 60
CAGG

(2) INFORMATION FOR SEQ ID NO:72:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19 amino acids
(B) TYPE: amino acid
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:

Arg Ser Ser Asp Phe Lys Lys Gly Asp Glu Leu Met Xaa Xaa Xaa His
1 5 10 15

Val Val Cys

(2) INFORMATION FOR SEQ ID NO:73:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 57 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: cDNA

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:73:

CGCGGATCCT CATTCCAGTT TTAGAAGCTC CACATCNNNN NNNNNAGTGG CATGTGG

57

(2) INFORMATION FOR SEQ ID NO:74:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 15 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: peptide

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:74:

Glu	Leu	Lys	Leu	Leu	Glu	Val	Asp	Xaa	Xaa	Xaa	Thr	Ala	His	Pro
1			5					10					15	

(2) INFORMATION FOR SEQ ID NO:75:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 28 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: cDNA

- (xi) SEQUENCE DESCRIPTION: SEQ ID NO:75:

CGCGGATCCT CATTCCAGTT TTAGAAGC

28

(2) INFORMATION FOR SEQ ID NO:76:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 5 amino acids
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: peptide

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:76:

Glu Leu Lys Leu Leu
1 5

(2) INFORMATION FOR SEQ ID NO:77:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 28 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:77:

CGACAGTCGA CCGATACAGT CAACTGTC

28

(2) INFORMATION FOR SEQ ID NO:78:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 28 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:78:

CGACAGTCGA CCAACTTGTG CCGGAAGG

28

(2) INFORMATION FOR SEQ ID NO:79:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 17 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:79:

TCGAGCATGG TGGCCGC

17

(2) INFORMATION FOR SEQ ID NO:80:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 27 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:80:

TCGAGTACCT TTCTCTTCTT CTTAGGG

27

(2) INFORMATION FOR SEQ ID NO:81:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 26 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: cDNA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:81:

CGACACTCGA GCCCACCGTA CTCGTC

26